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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,874	12/27/2001	James Hong	ACS 58090	7122
24201	7590	12/29/2003		
FULWIDER PATTON LEE & UTECHT, LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE TENTH FLOOR LOS ANGELES, CA 90045			EXAMINER NGUYEN, VI X	
			ART UNIT 3731	PAPER NUMBER
			DATE MAILED: 12/29/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/032,874

Applicant(s)

HONG ET AL.

Examiner

Victor X Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 7-8, 10, 12, 14-16, 18-19, 21 and 28 are rejected under 35 U.S.C. 102 (b) as being anticipated by Lau et al (6,066,168).

Lau et al disclose in figs 4-5 and figs 11-13, an intravascular stent having all the limitations of claims 1, 3, 12 and 21, including: a plurality of cylindrical rings (12); the cylindrical is defined by a series of undulations of preselected amplitudes which are defined by bar arms (13) that interconnect peaks and valleys. The undulations of a large amplitude are separated by at least one undulation of a relatively small amplitude. At-least one bar arm interconnecting a peak of each large amplitude undulation with a valley of a small amplitude undulation is non-linear (figs 5 and 12). At-least one link (32) connects each cylindrical ring to an adjacent ring to form the stent (10). At-least one bar arm interconnecting a peak of each large amplitude undulation with a valley of a small amplitude undulation is non-linear and all other bar arms are linear.

Regarding claims 5, 16 and 25, Lau et al disclose at-least one link (32) is non-linear.

Regarding claims 7 and 26, Lau et al disclose the link has a U-shape (see col. 6, lines 7-20).

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Regarding claims 8 and 14, Lau et al disclose the series of undulations defining each cylindrical ring are in phase with respect to the series of undulations of adjacent ring (figs 4-5 and 12).

Regarding claims 10 and 19, Lau et al disclose the undulations of a large amplitude are separated by at least one undulation of a relatively small amplitude (figs 4-5 and 12).

Regarding claims 15, 18 and 24, Lau et al disclose the two links connect adjacent rings and the links extend between a peak and a valley of adjacent rings (figs 4-5 and 12).

Regarding claims 27 and 28, Lau et al disclose the links extend from a non-linear bar arm of a cylindrical rings (12) to an adjacent cylindrical ring.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 6, 9, 11, 13, 17, 20, 22 and 23 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Lau et al (6,066,168) in view of Fischell et al (6,190,403).

Regarding claims 2, 4, 11, 13, 20, 22, Lau is explained as before. However, Lau does not disclose one non-linear bar arm has an S-shape.

Fischell et al teach one non-linear bar arm has an S-shape (fig. 1, item 4).

It would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify Lau by adding one non-linear bar arm has an S-shape as taught by Fischell et al in order to enhance a flexible links with a shape that will not touch as the stent is crimped

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down on the balloon. Regarding claims 6 and 17, Lau fails to disclose the link has a Z-shape. It would have been obvious matter of design choice to one skilled in the art at the time the invention was made to construct the link of Lau et al device with a Z-shape, since applicant has not disclosed that doing so which solves any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing with a Z-shape. In re Dailey and Eilers, 149 USPQ 47 (1966). Regarding claims 9 and 23, Lau fails to disclose the series of undulations cylindrical ring are out of phase with respect to the series of undulations of each adjacent ring. It would have been obvious matter of design choice to one skilled in the art at the time the invention was made to construct the undulations cylindrical ring of Lau et al device with out of phase, since applicant has not disclosed that doing so which solves any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing with out of phase that respect to the series of undulations of the adjacent ring. In re Dailey and Eilers, 149 USPQ 47 (1966).

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,033,433 to Her

U.S. Pat. No. 6,565,599 to Hong

U.S. Pat. No. 6,083,259 to Frantzen

U.S. Pat. No. 6,613,072 to Lau

U.S. Pat. No. 5,957,949 to Leonhardt

U.S. Pat. No. 6,607,554 to Dang

U.S. Pat. No. 5,653,727 to Wiktor

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor X Nguyen whose telephone number is (703) 305-4898. The examiner can normally be reached on M-F (8-4.30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Milano can be reached on (703) 308-2496. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-3982.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Victor X Nguyen  
Examiner  
Art Unit 3731

Vn  
December 18, 2003



**JULIAN W. WOO**  
**PRIMARY EXAMINER**